Schools of Dentistry Allied Health Sciences Graduate Studies Nursing Medicine

Medical College of Georgia
Vol. 1, No. 2 Fall 1970

MCG Today

This Issue—
University System of Georgia:
Meeting the Challenge of Health Professions Education

Progress & Committment

"Georgia's critical shortage of nurses and other professional and technical health personnel is well known. In a comprehensive study in 1962, the Surgeon General of the U.S. Public Health Service estimated that at least 1,200 nurses are needed annually in Georgia, while our nursing schools graduate about half that number. Other studies have revealed shortages and anticipated future shortages of medical doctors, dentists, dental hygienists, occupational and physical therapists, and other types of health workers."

This remark, taken from a report to the Regents of the University System of Georgia by Chancellor George L. Simpson, Jr., in 1966, is illustrative of a need for health personnel in Georgia that is still present.

But, since that time, the University System has made significant response to meeting the need and is continuing to attack the broad problem.

In the area of nursing, for example, enrollment in the system has grown nearly 500 per cent since 1965. Before 1965, there were two nursing programs operating in the University System. Now there are 18, educating nursing professionals on a number of levels. In 1965, 63 nurses were graduated from System institutions; last spring, 271 received their nursing degrees. Another four to five-fold increase in nursing enrollment is projected by 1975.

The dramatic increase in the numbers of nurses prepared by the University System was accomplished without sacrifice of graduate quality. Nursing, however, is only part of the health professionals education story in the University System of Georgia.

Other programs—medicine, dentistry, allied health and so on—have also been the focus of intense expansion efforts. The enrollment at the System's School of Medicine, located at the Medical College of Georgia in Augusta, will have increased by 45 per cent by next fall. From a class size of 90 in 1965, first-year medical student enrollment at MCG has grown to 136 this year, and will reach 144 next fall. Nearly 18 million dollars worth of construction at the Augusta institution has been completed or is nearing completion as MCG moves to keep pace with its expanding educational efforts. This institution has also implemented affiliations with community hospitals in Augusta, Macon, Columbus, and Savannah, and has initiated arrangements with other health and education related institutions to broaden its capabilities for physician education.

The area of education in allied health professions has also seen great expansion of programs and scope in the last five years. Allied health professionals are members of the health care team less well known than the traditional health professions, but of increasing importance in the delivery of health care now and in coming years. The fields include medical technology, physical and occupational therapy, dental hygiene, medical record science, respiratory therapy and many others. In the mid-1960s there were very few programs to train such persons in the University System. Now there are allied health programs operative at 13 of the 27 institutions of the University System.

About 30 other health-affiliated programs, such as the schools of pharmacy and veterinary medicine at the University of Georgia in Athens, add to the spectrum of health education in the System. A new school of dentistry at Augusta has been established and is starting its second class of students this fall.

In total, the University System of Georgia oversees about 65 health education programs at 22 of its 27 units. Last spring, units of the University System granted degrees or certificates to 563 in medicine, nursing and allied health fields. Projections based on present enrollments and starting new programs such as dentistry, show that this total will increase nearly four-fold by 1975 to 2,185 graduates. The numbers do not include the additional numbers of graduates that will be prepared by the many health-affiliated educational programs in the System.

The problems involved in meeting the health care needs of Georgians are numerous and complex, but the armament the University System of Georgia has arrayed to seek solutions is substantial, and the commitment of the System to meet health care needs is deep.

The purpose of this magazine is to convey the scope of health education in the University System of Georgia, its progress and its goals. □

THE COVER for the Fall number of MCG Today was prepared by the Cartographic Laboratory at the University of Georgia to illustrate the content of this one-subject magazine issue on the involvement of the University System of Georgia in the education of health care professionals. The symbols show the locations of University System programs in medicine, dentistry, nursing and health-affiliated activities.

Legend

- ★ Medicine
- ■ Dentistry
- ● Nursing, including masters, bachelors and associate degree programs.
- ▲ Health-affiliated activities, including degree programs related to health education as well as training programs for allied health professionals offering bachelors and associate degrees.

Table of Contents

4 Medicine's Mandate

9 Nursing: Many Programs, Many Graduates

12 Dentistry: Instruction, Investigation & Involvement

14 Health Professions Education in the University System

16 The Growing List of Health Professionals

20 Tomorrow

MCG Today is published four times a year for alumni and friends by the Medical College of Georgia, Division of Institutional Relations. Correspondence is invited and may be addressed to 1459 Gwinnett Street, Augusta, Georgia 30902.

Fall 1970 Volume 1, Number 2

Editor-in-Chief
James C. Austin

Editor
John W. Stokes

Editorial Coordinator
Sandra McGuire

Contributing Editors
Raymond C. Bard, PhD
Donald F. Bowers, DDS
Christopher C. Fordham III, MD
Harry B. O'Rear, MD
Robert E. Reynolds, MD, DrPh
W. Loren Williams, PhD

Design
Sharon Jones
Leah Sullivan

Problems: Serious, But Not Insoluble

The problems of health care in Georgia today are serious, complex and costly. They are not insoluble. Georgia shares with the nation the difficulties arising from marked increases in demand for health services, sharp rises in health care costs, maldistribution of health resources, and general public dissatisfaction with the system of medical care that has grown up in our pluralistic society.

The 'health industry' has experienced phenomenal growth during the last several decades and currently is the third largest industry in our nation with annual expenditures reaching the 60 billion dollar level. The phenomenal increase in demand for health care is understandable when one recognizes the growing affluence and sophistication of our American citizenry, the growing opinion that health care has been added to the list of human rights, the common beliefs in the value of preventive medicine, medical control of chronic ailments, and early care of acute diseases, and the faith that modern miracles of medicine await every patient in his physician's office. As public financing of health care for disadvantaged groups enlarges, and as national health insurance is debated in Congress, it is reasonable to predict that the demand for health care will continue to rise in the forseeable future.

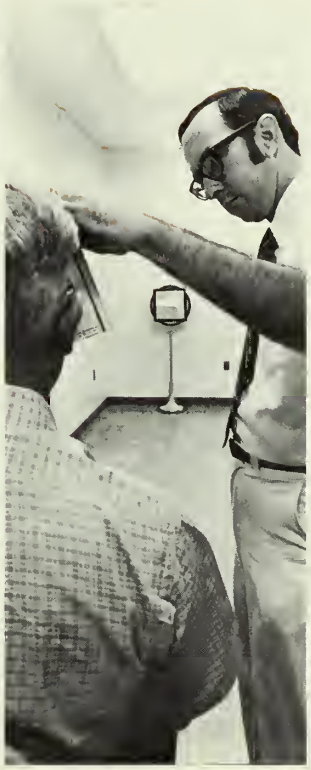
Yet modern medicine is very expensive. The average day in the average community hospital now costs $70, and in many university teaching hospitals it has reached $110; these rates will undoubtedly increase in the very near future. Educational programs to train health professionals are also very expensive, as are programs for research in new techniques in medicine, new drugs, and better methods of prevention and care of illness. Yet all these programs are necessary and worthwhile investments for our society to make.

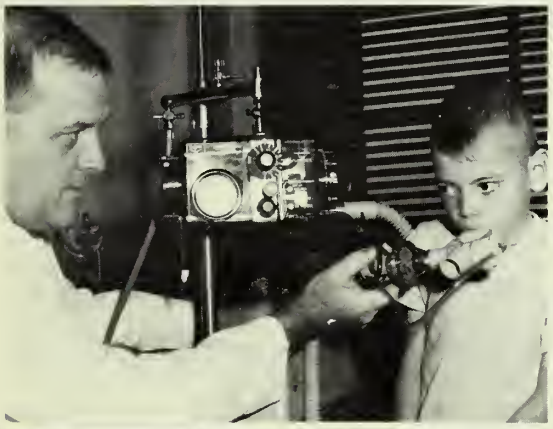
Maldistribution of health care resources is evident in the observation that cities and their metropolitan areas possess significantly higher ratios of physicians, dentists, nurses, hospitals, and other health resources than do small towns and rural areas. There are multiple reasons for this unequal distribution of health resources but it is none the less true, and contradicts our belief that every citizen should have equal access to health care. The piecemeal efforts in the past to equalize the accessibility and availability of health services to all our citizens have largely been unsuccessful.

One has only to glance at current newspapers and magazines to observe the ambivalence of the public regarding the health care situation in the nation today. The public takes great pride in the accomplishments of modern medicine but no longer hesitates to criticize the health industry for promising so much while making it so difficult for the average citizen to take advantage of these accomplishments. The public has discovered that good health care is eminently worthwhile, but is costly, maldistributed, discontinuous, often inefficient, and difficult to find. Overt demands by citizens, professionals, and legislators alike for more rational planning and utilization of health resources have been mounting over the past several years. These demands will continue with even greater strength until responsible leaders in the areas of organized medicine, public health, and medical education find more effective methods of cooperative planning and action for the health of our citizens.

The mandates of the University System of Georgia in health professions education are several. The primary mandate is to educate its students enrolled in the myriad of health professional categories in sufficient numbers and quality to meet the needs of the citizens of Georgia; this includes preparing them for the circumstances of the future as well as the present. Another mandate is to explore the need for new types of health professionals and to implement educational programs accordingly. A third mandate is to be an active participant in the discussions and plans for the statewide health needs of the citizens of Georgia. The University System of Georgia clearly recognizes these mandates. Moreover it recognizes that its students of today will be practitioners of tomorrow and that the traditional educational patterns must be carefully examined and modified in accordance with the needs of the future. Simply to increase the enrollment of students in various educational programs for health professionals will not solve today's problems and certainly not the problems of the future. Stretching our educational resources to the point of compromising the quality of education would result in students of inferior programs entering the health care system with only the traditional (and possibly outmoded) patterns of education. However, rational increases in student enrollment coupled with imaginative and persistent efforts in improving the quality and flexibility of the educational programs will enable our students to prepare themselves for efficient and high quality work in the health field today and for the future. In this manner the University System of Georgia will be responsibly educating its enlarging student body in ways that will help to alleviate the problems of health care distribution, efficiency, quality, accessibility and cost in Georgia.□

Moving To Meet Physician Manpower Needs





Each year, from 1962 until four years ago, the School of Medicine at the Medical College of Georgia admitted only 99 beginning students each September. In 1966, the entering class was increased to 104. Last year the class size jumped to 120. Now, it's 136. Next year it will be 144. The accompanying article details how MCG is moving to meet Georgia's physician manpower needs:

Because there was no room for 16 additional medical students in the two WPA-vintage basic sciences buildings at the Medical College of Georgia, temporary buildings were designed, funded and erected—in a matter of months.

Because these 16 new medical students would be physically separated from their fellow medical freshmen, a separate cadre of faculty was assembled and a special curriculum was designed for the 16—again, in a few months.

Because of these steps, which took place in Augusta last spring and summer, 16 more young men and women started their medical educations in the University System of Georgia this fall than did the previous September.

The manner in which the 16 newcomers were squeezed into the process of medical education at MCG without compromising the quality of their training is illustrative of one way MCG is moving to better meet Georgia's physician manpower needs.

The primary mission of the School of Medicine at the Medical College is to educate men and women for careers as physicians—quickly, effectively, and in numbers as great as possible. The numbers of graduates and the quality of their educations are both essential factors in this endeavor.

A 144-student entering class at MCG is not the peak projected. Expansion efforts have been under way a long time and are continuing.

The increase in size of first-year medical enrollment at MCG—37 students over four years—was accomplished by stretching faculty and facilities. This 37—student increase is a feat that would sorely tax even the most generously endowed medical

education facility, and would be an accomplishment almost out of reach for a newly-established medical school. Most new medical schools, for example, usually require three to five years in the planning stage before they accept their first students, then most times start with entering classes of 20 or less. Even with adequate funds, it usually takes a new medical school five to seven years to build its entering class to 30-36 students.

All of this speaks to a fact: there's a whole lot more than numbers involved in the education of physicians and working toward solutions to health manpower problems. It is essential that the relevance and quality of educational programs and the quality of physicians entering practice be of primary concern. It is essential that medical education be concerned with effective and sensitive translation of available medical science into patient care. It is essential that medical education be made more effective in light of changing circumstances of medical practice, citizen demand for health care and medical capabilities. The Medical College of Georgia is attacking these and other problems of physician education on a number of fronts.

Curriculum, for example, is undergoing change. At MCG, the first year medical student studies molecular, cellular and human biology, and examines the structure of the healthy human being through a multidisciplinary teaching method. In his second year, he is concerned with the biology of disease. He studies structural and functional abnormalities which occur in disease in an interdisciplinary program coordinating several departments. The third and fourth years of medical education at MCG are devoted to five primary clerkships aimed at providing fundamental clinical experience, and to the completion of elective courses, advanced clerkships and research projects. This work may take the student off campus to other medical institutions, community hospitals or preceptorships.

While this is not a radical departure from what is considered the usual medical curriculum, the MCG curriculum is undergoing such intense, but planned evolution that it's

attracting national attention. Both students and faculty of the institution are involved in formulating better methods for training more and better physicians, and the dean of the school is a member of a national committee considering ways to expand medical education.

Some of the key characteristics of recent curriculum changes at MCG include:

• Efforts to integrate traditional basic sciences into segments of coursework that relate to biological principles. Burgeoning medical knowledge has tended to obliterate sharp distinctions among the traditional basic disciplines; these efforts at MCG would blend the knowledge to be presented into intelligible entities. The structures of departments in basic sciences at MCG are also being re-aligned, combining some elements into entirely new departments. MCG is among the first medical schools in the country to take steps in this direction, and it's expected that a new Department of Cell and Molecular Biology at MCG will have considerable impact on the whole of medical education.

• Earlier introduction of medical students to clinical medicine so that basic medical biology and clinical medicine can be better correlated for students. Entering students this year will have experiences with patients in physical diagnosis. It's expected that these efforts will better enable future physicians to see the relevance of their basic science coursework, and its application to patient care.

• Introduction of elective opportunities. The body of knowledge in medicine now clearly exceeds that which could possibly be presented, much less learned, in a four-year period. MCG students now make certain choices concerning courses of study in accordance with their own talents and interests. These choices are made with faculty advice. Opportunities for electives are offered, not to encourage early specialization, but to give the student options for study in areas of interest.

• Third and fourth year clinical experience. Beginning in his third year, the student works intensively with clinical sciences faculty, learning to apply directly to patients the principles studied in earlier training. He learns this in great depth, and from individuals who have dedicated their careers to the education of physicians and the development of new knowledge. These students work with a top quality faculty that includes more than 145 full-time and 210 part-time teachers and practitioners. Important programs such as hemodialysis and kidney transplantation, open-heart surgery, hemodynamics, and advanced radiologic technology, to name but a few, serve to enrich the learning experience of third and fourth year students.

• Development of affiliations with other institutions. Opportunities for MCG medical students and physicians-in-training to study in affiliated community hospitals are being developed. Affiliative arrangements, under which MCG students may work with practicing physicians, serve to extend the MCG campus into nearly every area of the state. The most important of these arrangements, however, is with University Hospital, the city-county hospital in Augusta. Implemented last July after mutual efforts of MCG and University Hospital, this agreement assigns to clinical services at MCG certain patient care and teaching responsibilities at University Hospital. This is an important addition to educational programs at MCG. It provides students and house staff learning experiences with patients in a community hospital and with physicians in private practice.

MCG is also developing formal affiliations with major regional hospitals in Savannah, Macon and Columbus, as well as developing special programs at Waycross and Dublin, and an elective preceptorship with the Georgia Academy of General Practice. An affiliative arrangement between MCG's Psychiatry Department and the Georgia Regional Hospital at Augusta is also operative, giving MCG a direct relationship with the state hospital system. It is believed that these affiliations will not only increase the range of elective opportunities for medical students, but will more closely involve the School of Medicine with practitioners throughout the state. MCG also has cooperative arrangements with the University of Georgia, Georgia Institute of Technology and Emory University School of Medicine. Some MCG students take electives in other parts of the country and other parts of the world.

• Development of a Health Care Programs Unit. Under the direction of an associate dean, this unit works to provide medical students with an early opportunity to learn about health care programs, including their economic, political and social implications. This is especially important, since problems in the delivery of health care have become critical. Another part of this unit is a program for health services research aimed at developing improved collection and analysis of patient care information, as well as computer assisted efforts in the basic and clinical sciences.

While evolution of the medical curriculum and development of affiliative arrangements related to curriculum are areas of intensive activity at MCG, other factors also play important parts in MCG's move to meet physician manpower needs.

A great deal of attention is focused now on the primary Medical College teaching hospital, Eugene Talmadge Memorial Hospital. This teaching hospital, completed in 1956, had developed over succeeding years the image of a charity hospital. It attracted patients from across the state who were referred because of major medical problems and an inability to pay for care. Serious difficulty was encountered in the mid 1960s when spiraling medical costs put the hospital budget beyond the resources available from the Regents of the University System of Georgia.

The current necessity for expanding physician education, however, has now made it abundantly clear that a re-expansion of patient services in the Talmadge Hospital is absolutely required. Meanwhile, it has become evident that the charity hospital concept is no longer valid, and that few medical schools depend primarily upon a charity hospital for their clinical education programs. Moreover, for educational as well as financial reasons, the MCG teaching hospital must serve citizens of Georgia as a specialized referral center and should be available to those who

can pay, as well as those who cannot.

Therefore, efforts are being made in the Talmadge Hospital and across the state to change the function as well as the image of the hospital from that of a prototype charity hospital to a referral center for all the physicians of Georgia and their patients.

Programs for physicians-in-training—the residents and interns—are also undergoing re-examination at MCG. These physicians, who work in the primary and affiliated teaching hospitals learning the practice of medicine under medical staff supervision, play an exceedingly important part in medical education programs of the College. At present, there are 196 house officers training in MCG programs, and available data indicate that a large proportion of these physicians will remain in Georgia to practice medicine.

However, the percentage of MCG graduates remaining in Georgia for their internships has dropped from 63 per cent in 1963 to 37 per cent in 1970. Some factors causing this decline are limited numbers of internship positions at MCG and Emory affiliated hospitals, a decline in the ability of community hospitals to attract and maintain housestaff, and an improvement in the quality of Georgia medical graduates that apparently gave these physicians the competence and confidence to go to other parts of the country for postgraduate education. The growth of meaningful affiliations between MCG and community hospitals in Savannah, Macon and Columbus may reverse this trend by making postgraduate training at these hospitals more attractive to housestaff. The well recognized relationship between the location of a young physician's residency program and the location he selects for the site of his medical practice may then aid these communities in recruiting and holding more physicians.

Another new development has been the concept of a multi-institutional clinical center in Augusta. The keystones of such a center would be the Talmadge hospital, University Hospital and a new Veterans Administration Hospital. Talmadge and University hospitals are located on a contiguous tract of land adjoining land on which the new VA hospital will be built.

In recent months discussions have taken place between officials of these institutions and initial planning of a true clinical center has begun. The initial objective of such a cooperative arrangement would be the sharing of certain physical facilities and personnel so that the maximum quality and efficiency of patient care and health education may be provided.

Though this development involves inter-relationships of governmental agencies on the municipal, state and federal levels, it would retain the individual mission and identity of each institution. The three institutions are presently sharing the cost of outside consultants assisting in development of a plan for this cooperative effort, which could well serve as a national model.

MCG is involved in physician education to a depth un-realized by many Georgians. New approaches to the development of special teaching aids, programmed texts, new involvements in continuing education for physicians, establishment of programs for physicians in family practice, and many other vital programs are under way and beginning to show reward.

Medical education everywhere, as well as in Georgia, is facing these challenges; MCG and the University System of Georgia expect to play an important part in meeting them. □

Associate, bachelors & masters degrees—

400 Per Cent Nursing Graduate Increase Projected Over Next Five Years

Traditionally the nurse has been the physician's principal associate. Until recently her training below the baccalaureate level was provided almost entirely by hospital schools of nursing. In the past two decades, however, the trend has been toward collegiate education, in either two-year or four-year programs.

Changes in nursing education have been directly related to the changing role of the nurses. As practical nurse and technician programs arose, the nurse moved from the technical to more professional levels as manager and implementor of nursing services. Consequently, a broader educational base became desirable. Other factors such as rapid advances in medical knowledge, the growth of professional specialization, the thrust toward career development and mobility, and the high cost of training in complex hospital settings led to collegiate focus for nursing education.

In the University System of Georgia, the first nursing course was offered in 1941 at the Evening College of Atlanta. In 1943 the University of Georgia established a Department of Nursing Education with a center at the former Atlanta Division. This baccalaureate nursing education program remained at the University until 1956 when the Board of Regents transferred it to the Medical College of Georgia. At MCG this

Nursing in the University System of Georgia

Year	Enrollment	Graduates
1965	227	63
1966	271	62
1967	345	84
1968	598	112
1969	743	236
1970	961	271

Department of Nursing Education was elevated to a school with a dean as the administrative head, and in 1966 the School's program was expanded to include graduate education leading to the Master of Science degree.

Increasing demand for health services, a shortage of nurse graduates, and the rising cost of education generated the need for a shorter training period. The emergence of the junior or community college provided the setting for two-year nurse education programs. The objective was to produce a nurse with the knowledge and skill needed to join the basic nursing staff of a hospital or clinic. In addition, a shorter period of training and the convenience of a community-based program would attract a greater number of high school graduates as well as older women interested in joining the work force.

In 1965 the System committed itself to develop two-year associate degree programs at selected junior and senior colleges. To date there are 13 associate degree programs with another to be initiated next September. These programs will produce 206 graduates this year and are committed to increasing graduates about 400 per cent by 1975. The effectiveness of such two-year nursing education programs is illustrated by the performance of its graduates on the State Board Examination. Of the 328 associate degree graduates taking the examination through June, 1970, 73 per cent have passed. A recent evaluation of the quality of the graduates of the University System associate degree nursing program in Columbus showed physicians, nursing educators and other health professionals "enthusiastically endorse" the program. Many said they could "categorically state that these graduates are equivalent to, if not better than, graduates from traditional hospital programs." Among those individuals expressing this opinion were: Dr. Roy L. Gibson, chairman of the Muscogee County Board of Health and a member of the State Board of Health; Dr. A. B. Conger, president of the Muscogee County Medical Society; Dr. Clarence C. Butler, chief of staff at St. Francis Hospital; Sister Mary Evelyn, administrator, St. Francis; Mrs. Louise B. Eysel, director of nursing at St. Francis and president of the Third District, Georgia State Nursing Association. Also sharing these views were: Miss Joan L. Williams, director of nursing at the Medical Center Hospital, Joseph W. Mitchell, administrator, Medical Center Hospital, and Mrs. Josephine Graham, director of nursing at Bradley Center Hospital.

In addition to associate degree programs in nursing there are now four baccalaureate degree nursing programs in the System, two of which have been established since 1965. Together these two and four-year programs have significantly expanded nursing education opportunities in Georgia. From 1965 to 1970 enrollment of nursing students increased from 227 to 961, while the number of graduates rose by more than 400 per cent.

Valdosta State College, Valdosta

Abraham Baldwin Agricultural College, Tifton

Medical College of Georgia, Augusta

MCG

Georgia College at Milledgeville

University System of Georgia nursing education programs span the state and offer professional training at all levels. Masters degree programs are offered at the Medical College of Georgia and at Georgia State University. Four units of the System offer bachelors degrees, and 13 others have associate degree programs. Graduates of these programs have increased more than 400 per cent since 1965, and the number is projected to rise another 400 per cent by 1975. The accompanying photos are representative of nursing instruction in the University System.

Dalton Junior College, Dalton

Recently there have been innovative attempts to interrelate two and four-year courses of education for purposes of greater career mobility. Georgia State University is designing a program which will correlate the two-year associate and four-year baccalaureate nursing programs. Its objective is to enable a student to earn the baccalaureate degree with maximum transfer of credits from the associate degree. At Valdosta State College a "two plus two" program is under development. its purpose is to facilitate transfer of credits from a two-year general college education to the nursing program at Valdosta State.

The masters degree program under development at Georgia State will add a second graduate nursing program to the System. The current program at MCG, leading to the Master of Science in Nursing degree, is designed to prepare qualified students to practice as clinical specialists, as teachers in nursing, or as nursing service administrators. The selection of program majors includes nursing service administration, medical-surgical nursing, and mental health and psychiatric nursing.

Because of the specialized facilities and faculty located at MCG, the School of Nursing plays a major role in graduate and continuing education as well as in the preparation of nurse educators to staff the associate and baccalaureate programs in the System. Many of the faculty of the nursing programs throughout the State are graduates of the MCG School of Nursing. □

Dentistry—

Instruction, Investigation, Involvement

Though it's only four years old, the MCG School of Dentistry is already making a positive impact on the dental health manpower situation in Georgia. This expanding effort is the result of what the School calls its 3-I plan—Instruction, Investigation and Involvement.

The most obvious way the School can effect a favorable influence on the dental manpower picture is by producing numbers of dentists trained to join the State's existing pool of dentists in meeting the dental health needs of Georgia. The School became truly active in this area in September, 1969, when its first class began the four-year curriculum that leads to a Doctor of Dental Medicine degree.

The planning and preparation required to initiate this program began in 1966. This pre-operational phase of three years is a remarkably efficient record for developing a new school of dentistry when compared to similar programs recently started in other states.

Although more dentists are needed, mere production of their numbers is not the solution to the dental manpower problem. The experiences of many dentists in private practice, formal research, and the results of numerous dental health care programs have demonstrated that more health services can be delivered more efficiently and more economically by dentists if they properly utilize the capabilities of professional dental auxiliary personnel.

An important part of the dental student's training at MCG is learning how to properly use professional auxiliary personnel to help provide high quality dental health care. Early in his training, the student gains an understanding of his role as a member of an effective and efficient dental health care team.

Still there is another side to the teaching development of the dental team approach—the training of dental auxiliaries. At MCG, the School of Allied Health Sciences offers a four-year course in dental hygiene. This presents opportunities for dental students and dental auxiliary students to learn the teamwork approach that includes medicine, dentistry and all the allied disciplines.

While the concept of team training in the Medical College environment is a valid one, it is also important that training opportunities be available to meet immediate needs around Georgia. In a consulting capacity, the School of Dentistry has been involved in helping the University System develop programs to train dental hygienists at various colleges around the state. In addition to the program at MCG, programs at Armstrong State College, Macon Junior College and Albany State College are operational. A fourth program, at Clayton Junior College, is planned to begin next fall.

Several dental health care programs for indigent children have been completed or are now under way as team efforts of the School of Dentistry, School of Medicine, and the School of Allied Health Sciences' Department of Dental Hygiene. These programs involve both the Instruction and Involvement phases of the 3-I approach. In addition to the learning experience, a number of needy children receive valuable health care. Special attention to cleft lip and palate children provides an important dimension to the team program.

The idea of looking to the dental auxiliary as an important means of increasing the dentist's potential to deliver more health services is a relatively recent one. Many practicing dentists who are just reaching the peak of their productive careers had no opportunity as dental students to learn how to effectively use dental auxiliary personnel. For that reason, the School of Dentistry has devoted a large share of its continuing education program to courses for the dental health team. Several courses designed for the dentist and his auxiliaries held last year and scheduled for this year cover such subjects as new preventive dentistry programs for patient education, the management of office emergencies, and new techniques in dental radiology.

Dental health manpower needs include needs for dentists with special training. The earliest formal program at the School of Dentistry was a three-year internship-residency program in Oral Surgery begun in 1967. In addition to annually producing two specialists, trained in the surgical treatment of such complex problems as oral cancers and severe injuries to the face and jaws, the program itself has afforded a high level of treatment to more than 7,000 patients from all over Georgia in a single year.

This fall a two-year training program in orthodontics, the dental specialty that deals with straightening teeth, was started.

Research into the method and tools for the delivery of dental health care is also an important activity and forms one program in the Investigation phase of the 3-I plan. Several current research programs at MCG are directed to developing and studying materials and methods to provide more effective, efficient and economic dental health care. One program started last year, for example, is evaluating a system for providing children in low-income schools with dental health education and preventive care.

In terms of new and improved materials, current work is under way on a variety of items, including artificial bone to replace missing or diseased portions of the jaws and an effective local anesthetic agent that does not require injection. □

Health Professions Education In The University System of Georgia —Since 1828

Public higher education in Georgia has been engaged in the education of health professionals since 1828—the founding date of the Medical College of Georgia in Augusta —but only in recent decades has the University System of Georgia entered into health care education programs on a large scale.

Now, in addition to medical, dental, nursing and allied health programs at Augusta, Regents of the University System oversee about 65 health education programs at 22 of the 27 units of the University System. Also in operation in the System are about 30 health-affiliated educational programs, such as the schools of Pharmacy and Veterinary Medicine at the University of Georgia, Athens, programs in hospital administration at Georgia State University, Atlanta, and various other programs at other units of the System.

While most of the health-affiliated educational programs in the System are on the sub-doctoral level, there are a number of areas in which students may pursue graduate degrees. Among these are the master of science degree in nursing, offered at the Medical College of Georgia and at Georgia State University. MCG granted two MS degrees in nursing last spring, and expects to enlarge its graduating classes to at least 40 MS candidates by 1975. Georgia State has recently started offering the MS in nursing, and expects to grant about 20 degrees at commencement 1975.

Some other graduate level health programs in the System, their locations, the numbers of degrees they granted last year and the numbers expected to be granted in 1975 are:

Master of science in hospital administration, Georgia State University, 51; 55. MS in medical illustration, Medical College of Georgia, 3; 7. MS in medical technology, Georgia State, a new program; eight by 1975. MS in physical therapy, Georgia State, a new program; 12 by 1975. MS in hospital and medical systems, Georgia Institute of Technology, Atlanta, 5; 10.

The specific nursing and sub-doctoral health professions educational programs are shown in the accompanying tables. □

University System Nursing Programs

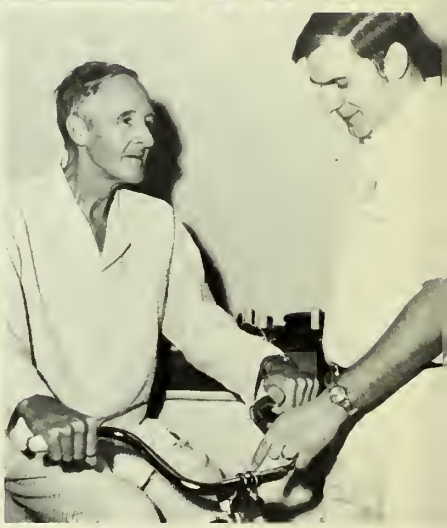
	First Year Of Operation	1970 Graduates	1975 Graduates
Masters			
MCG	1968	2	
Georgia State	1971	0	20
Bachelors			
Albany State	1961	7	35
Georgia State	1969	0	125
MCG	1956	56	58
Valdosta State	1969	0	20
Associate			
Abraham Baldwin	1965	20	150
Albany Junior	1967	15	50
Armstrong State	1966	32	50
Augusta College	1969	0	35
Brunswick Junior	1967	20	35
Clayton Junior	1969	0	60
Columbus College	1967	36	65
Dalton Junior	1968	12	100
Georgia College at Milledgeville	1968	9	25
Georgia Southwestern	1967*	28	38
Georgia State	1969	13	140
Kennesaw Junior	1968	6	60
South Georgia	1968	15	25

*Had 3-year cooperative program with local hospital from 1953 to 1966.

Allied Health Programs

	Level	1970 Grads	1975 Grads
Dental Hygiene			
Albany Junior (begins in 1971)	A.D.	0	22
Armstrong State	A.D.	18	30
	B.S.	0	5
Columbus College (begins in 1971)	A.D.	0	30-35
Macon Junior	A.D.	13	20
MCG	B.S.	13	24
Health Care Administration			
Armstrong State	B.S.	0	15
Hospital Administration			
Georgia State	B.S.	35	150
	M.S.	51	55
Health Facilities Management Program			
Dalton Junior	A.D.	0	20
Medical Illustration			
MCG	B.S.	4	8
	M.S.	3	7
Medical Laboratory Technician			
Dalton Junior	A.D.	0	35
Medical Secretary			
Abraham Baldwin	A.D.	0	20
Medical Technology			
Armstrong State	B.S.	2	10
Columbus College (begins in 1971)	B.S.	0	20-25
Georgia College at Milledgeville	B.S.	5	15
Georgia Southern	B.S.	5	15
Georgia State	B.S.	15	65
	M.S.	0	8
MCG	B.S.	13	32
Savannah State	B.S.	2	6
Valdosta State	B.S.	1	12
West Georgia College	B.S.	5	15
Mental Health Assistant			
Georgia State	A.D.	0	35
Occupational Therapy			
MCG (begins in 1971)	B.S.	0	20
Pediatric Assistant			
Georgia State	A.D.	0	30
Physical Therapy			
MCG (begins in 1971)	B.S.	0	20
Georgia State	B.S.	0	50
	M.S.	0	12
Radiologic Technology			
MCG	certificate	8	8
	B.S.	10	15
Respiratory Therapy			
Georgia State	A.D.	0	50
	B.S.	0	15

The Allied Health Professionals: Less Familiar, But Growing In Importance



The time-honored health professions—medicine, dentistry, nursing—are well recognized by the public as traditional contributors to health care. Less familiar are those members of the health care team belonging to professions allied in the battle against disease—medical technology, physical therapy, radiologic technology, occupational therapy, dental hygiene, medical record science, respiratory therapy, and many others.

The services provided by this group of medical and dental care workers are often not readily visible. Medical technologists function in laboratories, rarely visited by patients. Radiologic technologists are seen in action with large X-ray machines when patients are delivered to special facilities. Medical record librarians are hidden away in secluded parts of hospitals, surrounded by data files and increasingly by computing machines. On the other hand, a variety of therapists actually make direct contact with patients in physical and mental rehabilitation as practiced by occupational, physical, and respiratory therapists. The ladies collaborating with dentists—dental hygienists and dental assistants—contribute directly to oral health care. For each physician these days, about a dozen allied health professionals participate in some phase of medical care delivery, and this army of workers is destined to grow in numbers.

The contributions of allied health care workers have increased in importance for a variety of reasons. To begin with, medical knowledge and practice have become exceedingly complex, making it necessary for doctors to depend more and more upon professional associates for diagnosis and therapy. The relative shortage of physicians and dentists has aggravated the situation, at the very time when the need for more widely distributed health care is becoming increasingly apparent and the levels of expectation raised beyond available resources. Moreover, as medicine and dentistry become ever more specialized in response to the flood of new knowledge, the skills of highly expert doctors must be extended through the hands and minds of associated professionals with lesser training.

Thus, the need for allied health workers in greater numbers, at several levels of education, and in newer fields must be met. Baccalaureate degree allied health graduates assume such professional responsibilities as provision of great technical skills in special areas, the supervision of lesser trained associates, the administration of health care support units, and the teaching of the oncoming wave of students. Associate degree allied health graduates swell the ranks of the health care delivery team, providing vital services in all areas supporting the traditional and newer professions.

Management of the health care distribution system—private offices, group practices, clinics, nursing homes, hospitals—requires the skills of individuals specially trained in these areas. Thus, programs in medical secretary practice and office assisting are in operation. Administrators graduate from educational programs qualifying them to manage nursing homes and hospitals. As the health care distribution system expands and changes, adequately trained administrators are required in increasing numbers.

The need for patient education is becoming more apparent. Much of this need is met currently by individuals whose skills exceed the need, such as physicians and nurses advising patients about diet and weight control, drug utilization, self-testing, exercise, and so on. Programs in patient education will provide graduates who will assume these responsibilities in patient care environments and, additionally, in schools of all types, in retirement homes, and industrial and commercial facilities.

Throughout the Nation, exciting innovations are being evaluated. Most promising are the educational programs producing a new breed of allied health workers—the medical specialty assistants, otherwise known as physician assistants, in such medical specialties as pediatrics, obstetrics, anesthesiology, psychiatry and other areas. Novel programs enroll individuals with previously acquired medical skills, such as registered nurses, allied health specialists and retiring Armed Forces personnel. Such assistants function under the direct supervision of physicians who relinquish the more routine aspects of diagnostic and therapeutic procedures to these assistants. Thus, the pediatrician in office practice devotes his skills to situations warranting his special talents while the pediatric assistant attends to the numerous aspects of well-baby care: growth and development, nutrition, immunization, and so on. Under more dramatic circumstances as, for example, the hospital emergency room, surgical and medical specialty assistants work side by side with physicians in managing trauma cases and other acute needs for health care. As the impact of preventive medicine increases, more people will require regular medical check-ups in clinics, involving mass screening tests manned by allied health workers and physician assistants.

As increasing advantage is taken of modern communication and transportation technologies, physician assistants will practice under the direct supervision of physicians in low income environments and in rural areas. Contact will be maintained by telephone, ultimately via television-phones, so that information can be exchanged and decisions made rapidly and with precision. If patients require hospitalization, modern ambulances will transport them speedily to centers staffed by physicians and surgeons. In time, helicopters will be employed for even faster transportation, especially in the sparsely populated rural areas with less developed highway systems.

These advances, and many others still at the thought stage, will increase the need to continue the education of all health care workers. Such education will be delivered most conveniently by the use of modern communications technology which will include audiovisual television tapes, computer-assisted learning devices, line-operated copying machines, and other modes. □

Many Related Disciplines Play Vital Roles In Health Professionals Education

When health education comes to mind, most think of doctors—physicians and dentists—but there's another kind of doctorate that plays an important role in educating health professionals in the University System of Georgia.

These are the PhDs, persons highly trained in health-related disciplines. At the Medical College of Georgia, the School of Graduate Studies grants the PhD degree in anatomy, biochemistry, endocrinology, microbiology, pharmacology, and physiology. Many of their graduates pursue careers associated with the health field by teaching basic sciences to students in health professions education programs.

Other highly trained specialists are becoming aligned with the health field, cooperating with traditional health practicitioners in myriad ways. The spectrum of health has thus been expanded to include preventive and restorative services as well as diagnosis and treatment of a specific disease.

For example, great emphasis is now being placed on the environmental aspects of illness since certain air and water pollutants contribute to health problems. Public health physicians are becoming more involved with environmentalists in significant health activities.

In the University System of Georgia there are programs to train people for such work in the health field. Georgia Institute of Technology has graduate programs in sanitary engineering and public health engineering. This fall the University of Georgia began a new program of study in environmental health to train people for careers in public health departments and in related agencies. Health education courses for public school teachers are also offered throughout the System.

Restorative and rehabilitative measures have broadened the outlook for a large group of people who in the past have been severely handicapped and incapacitated. The fields of health and education are now working together to maximize the potential of these individuals, enabling them to assume productive roles in society. Education programs at the University of Georgia, Georgia State University, and Georgia Southern College are training people in specialized areas such as exceptional child education (mental retardation, motor handicapped, speech pathology, and emotionally disturbed), rehabilitation counseling, and recreation for the ill and handicapped.

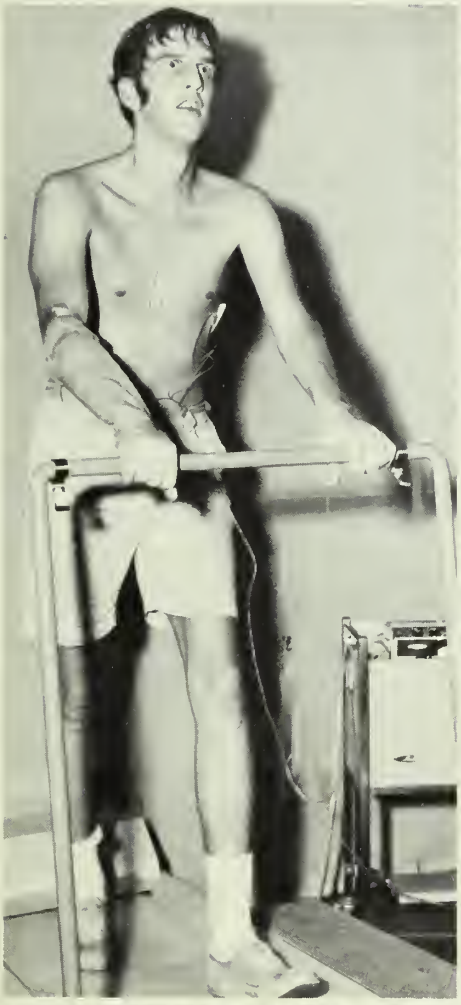
The trend toward community mental health centers, especially on an out-patient basis, has increased the requirements for clinical psychologists. To meet the demand for such services, clinical psychology programs are functioning at the University of Georgia and Georgia State.

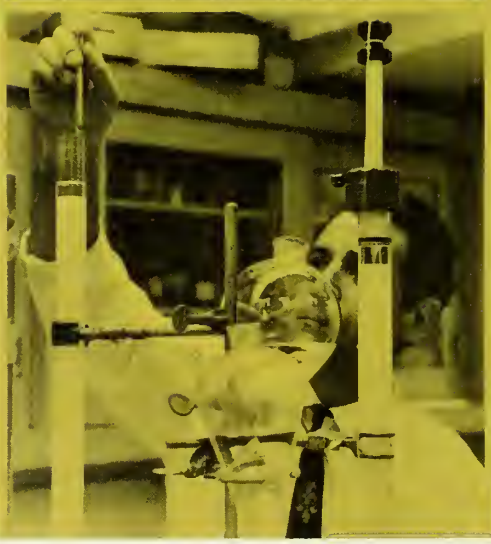
Other professions obviously affiliated with health and offered at the University of Georgia are pharmacy and veterinary medicine. In 1965 the College of Veterinary Medicine established an Institute of Comparative Medicine which functions as a coordinating center for biomedical and environmental health research. Veterinarians are also engaged in preventive aspects of health such as meat and milk inspection.

Systems engineers have recently become interested in the health field. To maximize the rapid advancement in medical science and technology, there is an urgent need for improvement in productivity in the delivery of health care services. Application of systems analysis to the health field can assist in attaining the highest quality and greatest quantity of services. Since 1967 there has been a cooperative health systems engineering program in Georgia.

As part of this program the Georgia Institute of Technology collaborates fulltime with the Medical College of Georgia in research and service activities. Systems engineers work with health professionals as well as hospital administrators, dietitians, and pharmacists to improve the institutional health service system. In 1969, a Health Services Research Center was established by Georgia Tech in a further effort to bring multidisciplinary and multi-institutional resources to bear on health problems within the State.

The importance of increased productivity of present health personnel and more effective utilization of management techniques is marked by the shortage of health manpower and facilities and the increasing demand for services. These programs, however, are playing an increasingly important role in the meeting of health care needs of Georgia and are being intensified as the University System of Georgia moves to meet challenges in health professions education. □





Tomorrow...

Simply to increase the enrollment of students in various educational programs for health professionals will not solve today's problems and certainly not the problems of the future.

This truism indeed poses a challenge for the University System of Georgia. Although many more trained professionals at all levels of health care are needed and will be prepared, what else does the future seem to demand? The year 2000, when many of the physicians, nurses, dentists and allied health personnel graduating today will reach the peak of their professional competence, will pose many problems that we cannot anticipate now. Research in health services care and programs will provide some of the answers. These answers, in turn, will help structure the content of the educational programs that will produce tomorrow's health professionals.

The need for research in health care services has not long been recognized, but there are pioneering programs in the System at the Medical College of Georgia and at Georgia Tech. These programs, building on a core of System scientists, physicians, behavioral scientists and other professionals, will study many approaches to delivering health care to all citizens in a timely and efficient fashion. The effectiveness of health teams of varying composition will be studied. Model clinics and other arrangements will be established to test their relevance in meeting the need for health services in rural and urban areas. Procedures for attracting health professionals to areas where health problems are great will be studied.

...Tomorrow

Results of studies like these will begin to condition the character and content of the many programs that must expand in terms of both quantity and quality. Quantity simply refers to the number of people prepared; while quality refers to an individualized professional competence that is most relevant to meeting health care needs.

In medicine this dual expansion will likely take the form of innovative programs closely correlated with health service research and evaluation. For example, there is an immediate shortage in Georgia of physicians practicing family medicine. This is due in part to the growth of specialization within medicine and the decline of general practice residency programs in community hospitals. Yet the dire need for generalists to serve urban and rural communities has stimulated students and faculty to re-examine this gap. Now that there is a national board certified specialty in family practice and the possibility of federal funding to initiate programs in this area, a family practice unit coordinated by MCG faculty and centered in a community hospital would assist in meeting immediate needs.

Such an undertaking would present opportunities for innovations in other areas of health care, such as health services research and development, rural health care, and the training of allied health manpower for the family practice setting.

Utilization of the community hospital for training will expand.

While these facilities are potential sites for medical education and broaden the student's clinical training, it is unrealistic to expect community hospitals and their staffs to assume an excessive burden for medical education. With effective organization and the cooperation of MCG faculty, community physicians and facilities can be of real assistance in sharing the educational load. Yet in terms of quantity and in-depth educational experience, the substantial part of the clinical curriculum should be provided at the Medical College's hospital.

The shortage of physicians in the State of Georgia and the Southeast is abundantly clear and the School of Medicine at the Medical College of Georgia has responded by embarking upon a major expansion effort. This educational institution has a prime responsibility to increase the number of physicians being educated and trained, as rapidly as possible.

Although the educational processes must also be modified in order to prepare young physicians for medical practice in the coming decades, significant increases in the numbers of physicians and other health care personnel are urgently needed. Accordingly, the entering class at the School of Medicine will be at a minimum of 144 students in September 1971; this represents an increase of almost 50 per cent since 1965.

Expansion at an already growing and progressive institution with close community relationships throughout the state appears to be a promising approach to increasing numbers of physicians.

In view of the magnitude and diversity of programs of the MCG School of Medicine and its complex relationships with institutions throughout the state there is every reason to believe that the medical school at MCG and related health science schools can expand progressively to meet the needs of the citizens of Georgia, provided the necessary resources are acquired.

Educational programs in the allied health fields are in various stages of development in the University System. Greatly expanded numbers of students in nearly all of the programs and the addition of new programs in this area testifies to the commitment of the System to allied health training.

One of the most promising new educational programs in this area is directed toward the concept of the physician assistant. Physician assistants, working in a number of specialties, function under the direct supervision of physicians who delegate to them the more routine aspects of diagnostic and therapeutic procedures.

Such individuals might be trained to work in hospital emergency rooms, operating rooms, and screening clinics, as well as in a number of other areas. A program to prepare pediatrician's assistants is now under way at Georgia State, and others are planned.

The nursing education programs of the University System have undergone amazing expansion. It has been estimated that baccalaureate and associate programs will expand enrollment 400 per cent over the next five years, a rate of expansion identical to that actually achieved between 1965 and 1970. The masters degree programs will undergo a much larger expansion.

Additional baccalaureate programs are feasible at two units of the University System. Associate degree programs could be established at two or three other colleges.

Many of the associate and baccalaureate nursing programs in the junior and senior colleges of Georgia are in their early phases and offer potential for enlargement. Also, within the University System there are several combinations of institutions close enough to each other to be welded into a single nursing education program. Such an approach would enable the various institutions to share scarce teaching personnel, clinical and physical facilities.

Nursing career development and mobility are the subjects of considerable discussion within the University System, and efforts are under way to unify the various programs in nursing education into a single career ladder with upward mobility and career planning as primary motives.

The School of Dentistry at MCG enrolled its first class in 1969. This class contains 24 students and total enrollment will expand to 56 by the fall of 1971.

Dental School programs for expansion includes an enlarged program in continuing education with the Georgia Dental Association.

Initial efforts in this direction have been quite successful. Postdoctoral programs in all the recognized dental specialties will soon be implemented, as will training programs for dental assistants and dental technologists. A center for Pharmacology and Toxicology is also planned, as are health care field studies examining methods of dental care delivery in various areas throughout the state.

The problems of health care in Georgia are complex, and the approaches to them must be diversified. Increased numbers of students for the various programs will only partly solve these problems; rational planning coupled with ongoing evaluation and critical analysis of the programs themselves and their ability to meet future needs are necessary elements to make the graduates of these programs adequate to their tasks.

Clearly the University System of Georgia's endeavors in the health field are undergoing careful study and rapid expansion. These endeavors are costly, not only in dollars but in time, personnel and facilities. The people have provided through their legislators and the Board of Regents of the University System substantial funds that have made the progress described in this magazine feasible. However, additional resources will be required if the expansion in quality and quantity needed for tomorrow is to take place.□

Schools of Dentistry Allied Health Sciences Graduate Studies Nursing Medicine

MCG Today

Division of Institutional Relations
Augusta, Georgia 30902

NON-PROFIT ORG.
U.S. POSTAGE PAID
Augusta, Georgia
Permit No. 210